FIRST RESULTS FROM BEAM TEST

G. Cibinetto, E. Feltresi, N. Gagliardi, M. M
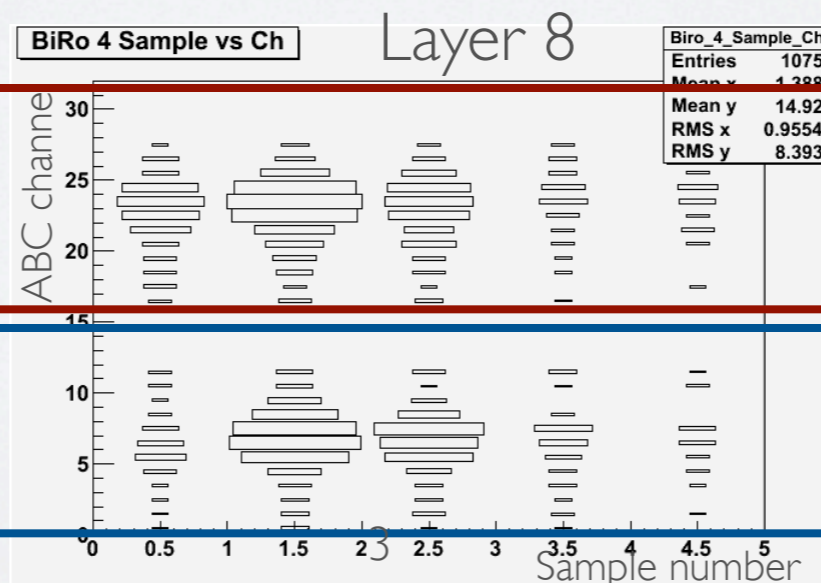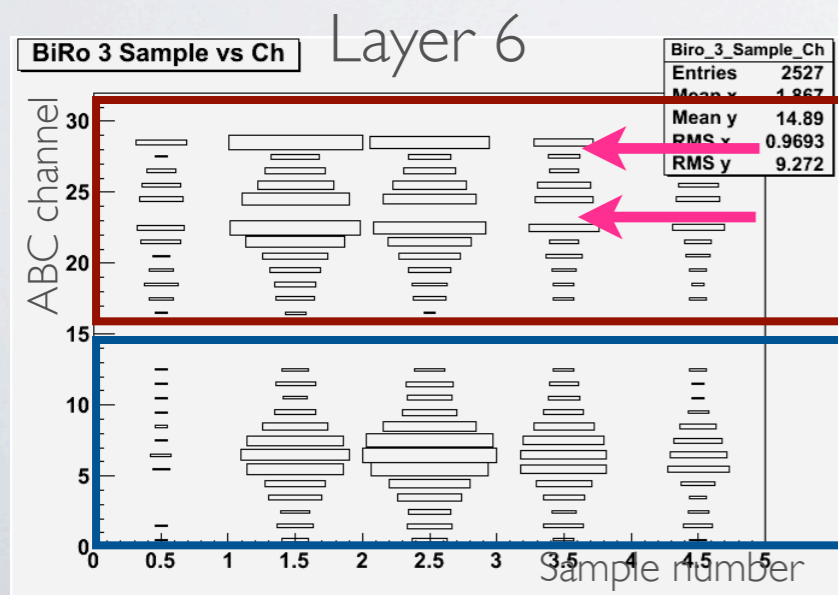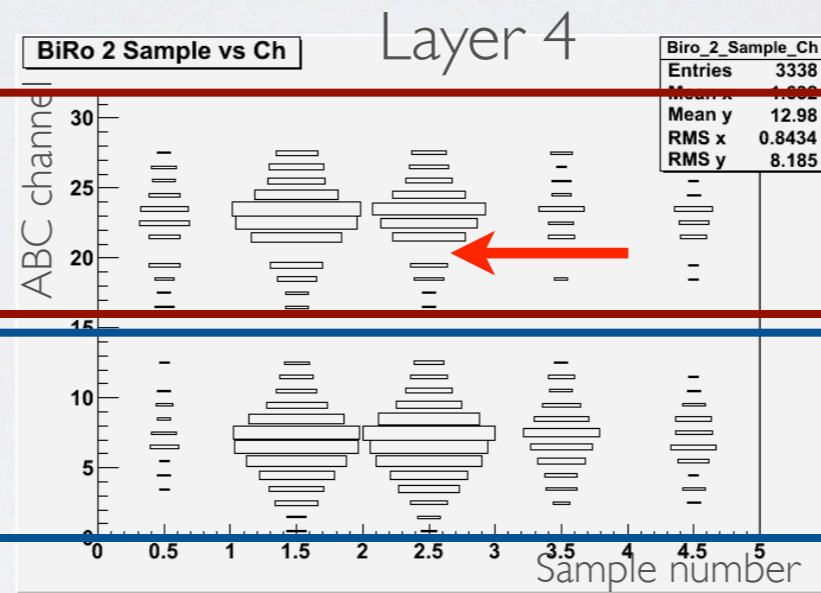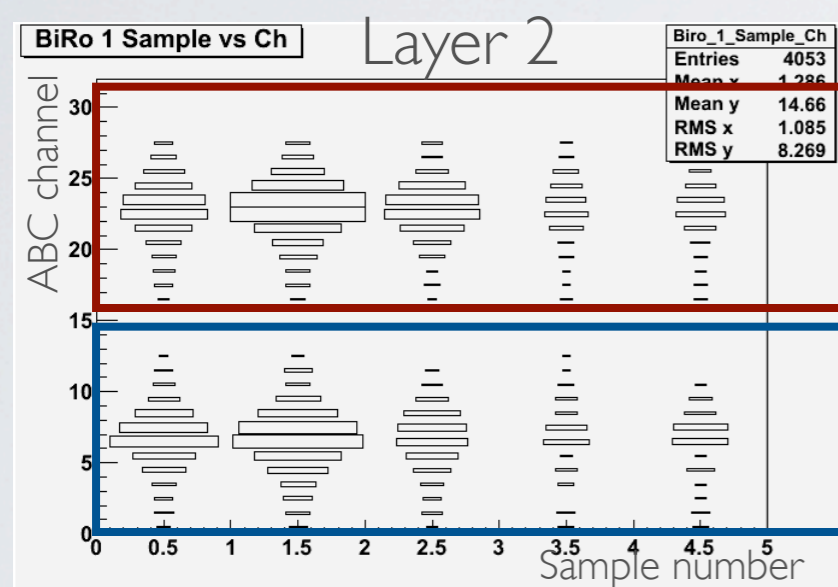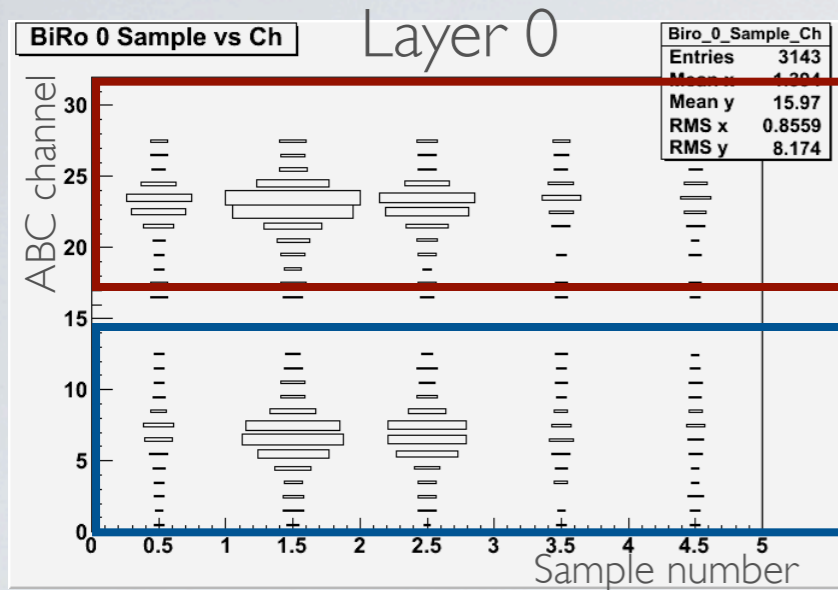
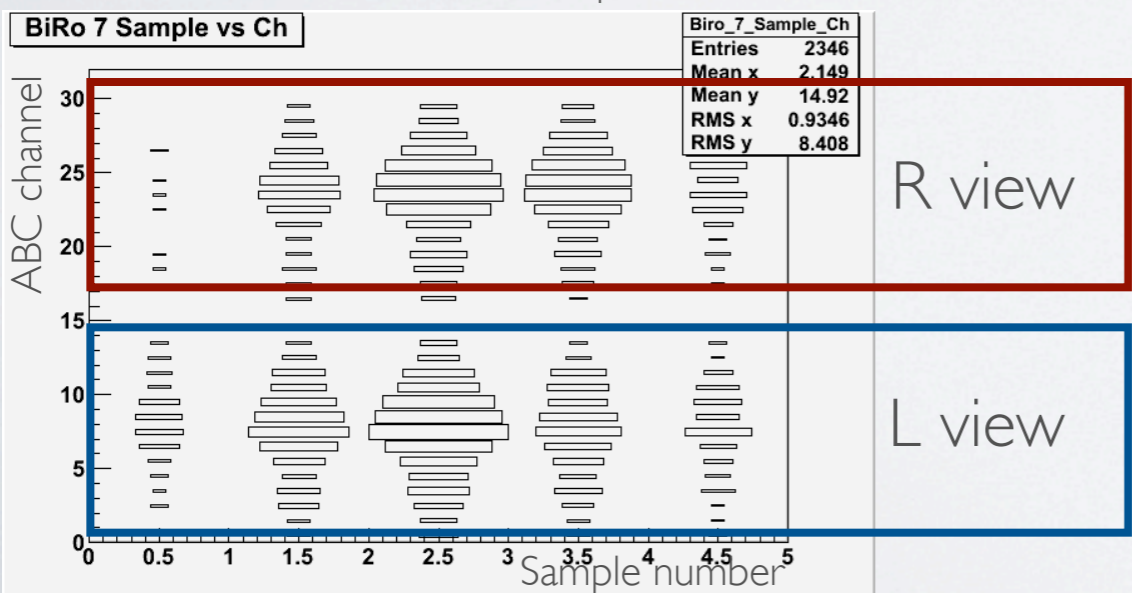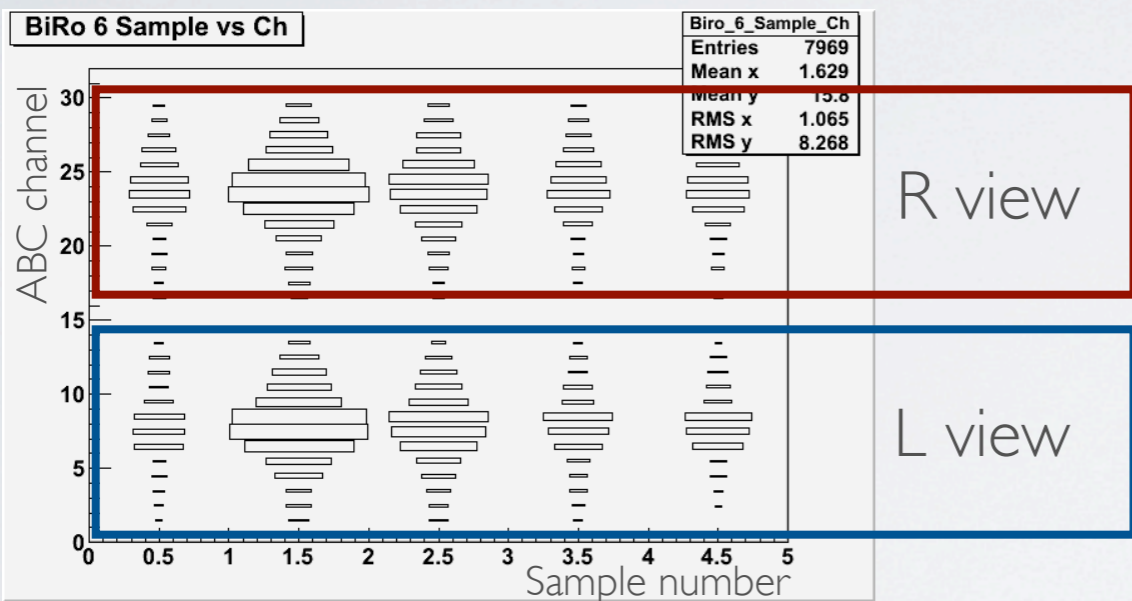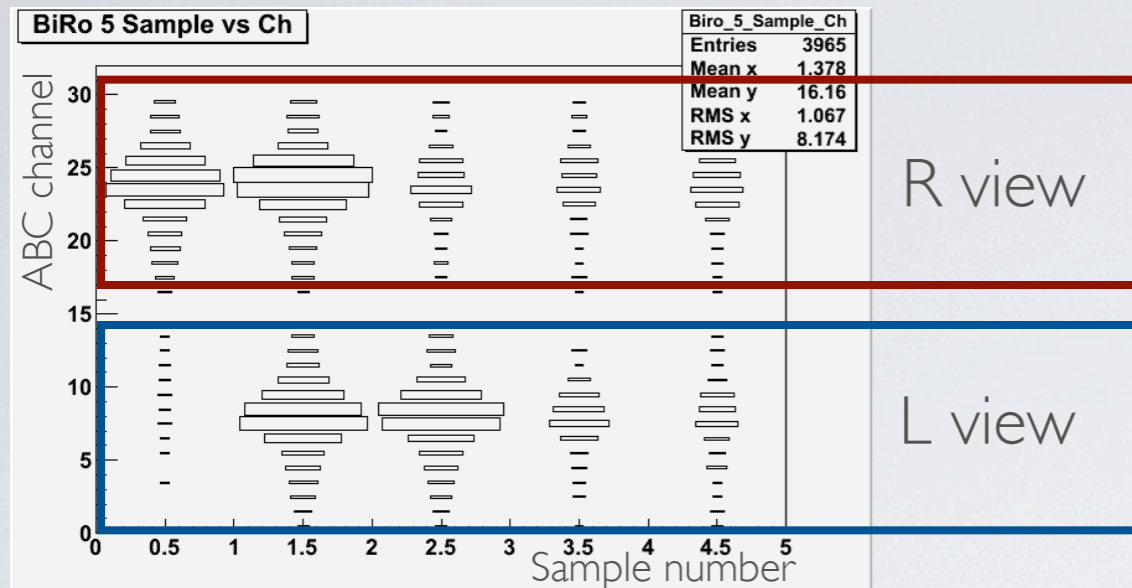XV SuperB General Meeting - Caltech

1

OUTLINE

- Binary readout

  - Hit maps

  - Occupancies

  - Sandwich efficiency

- Very first look at TDC readout

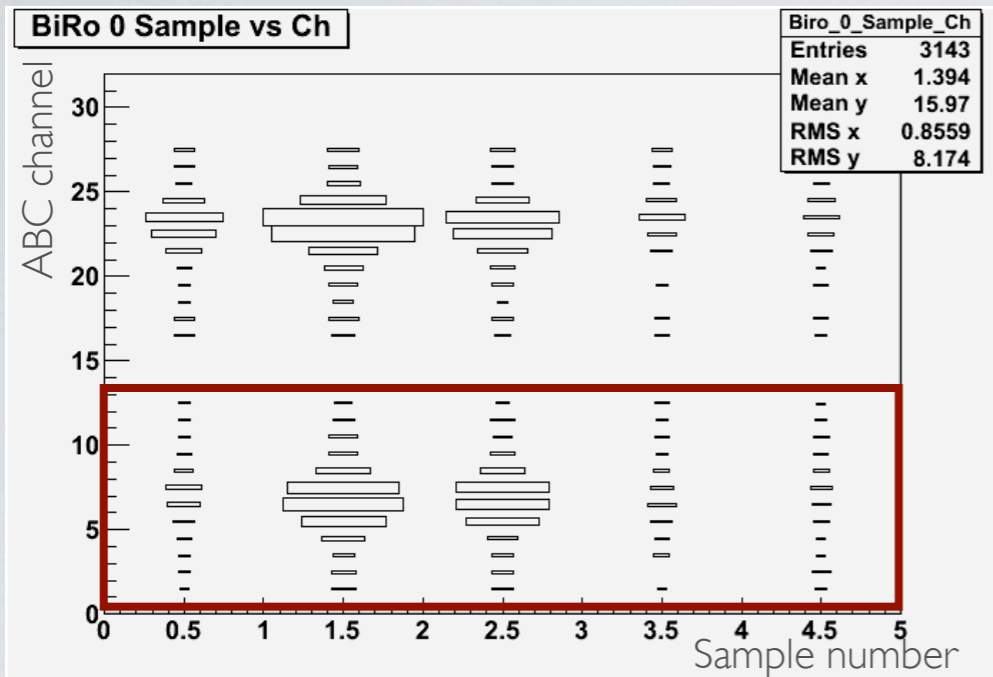- Conclusions & future plans

BIRO LAYERS HIT MAPS

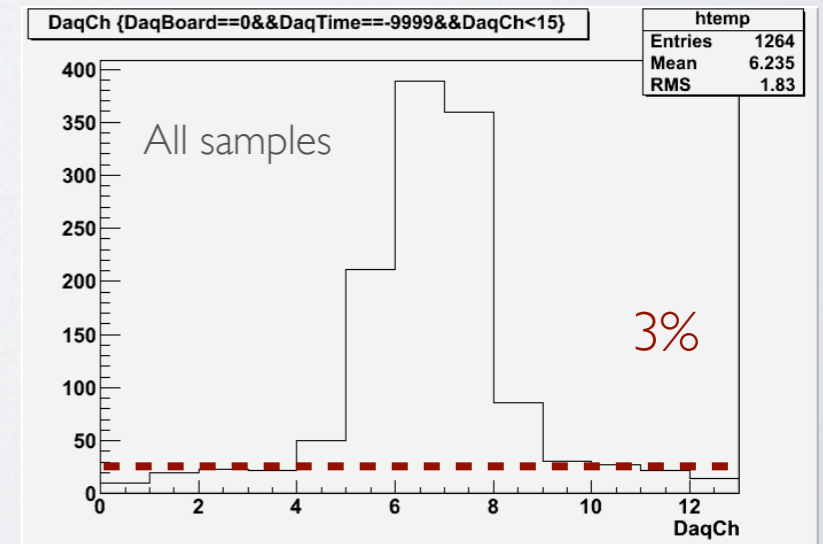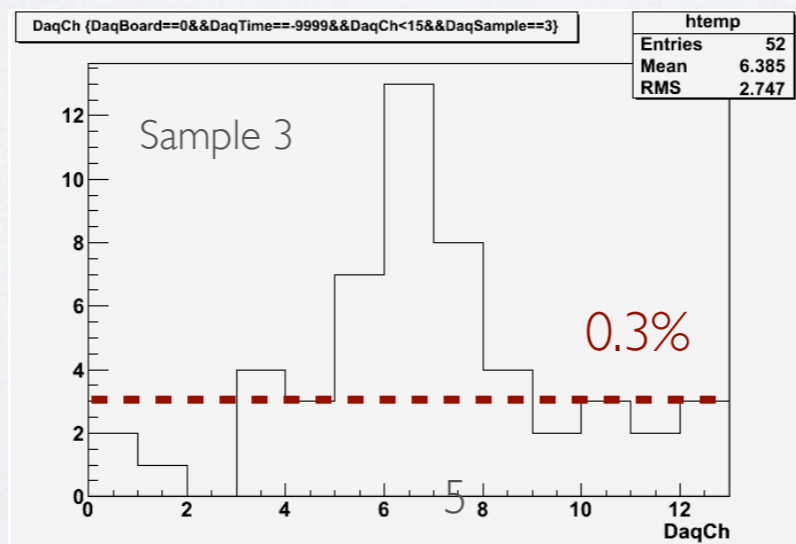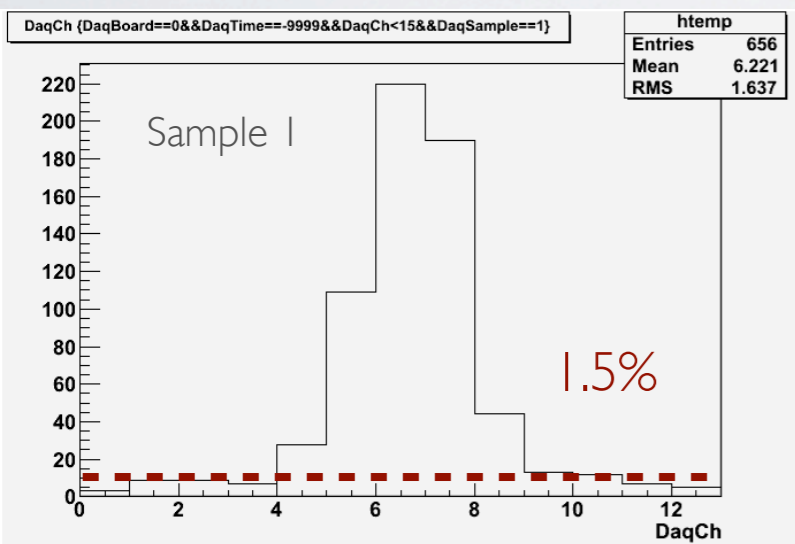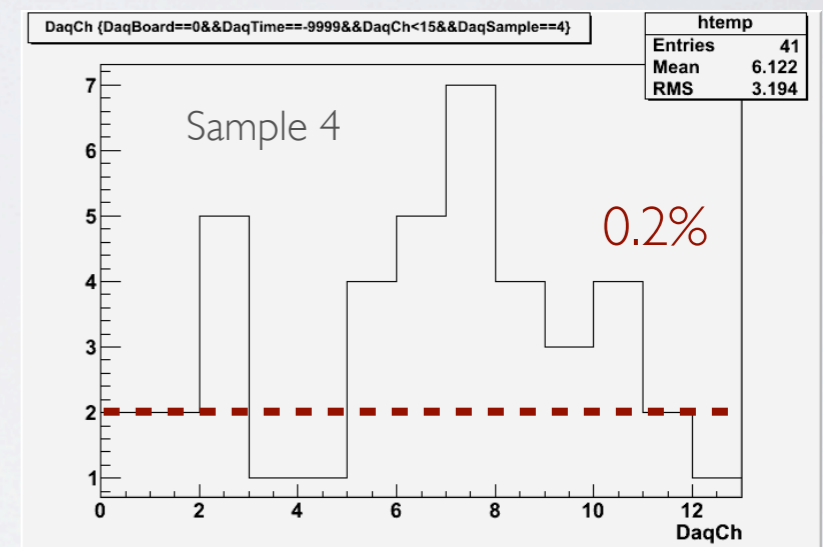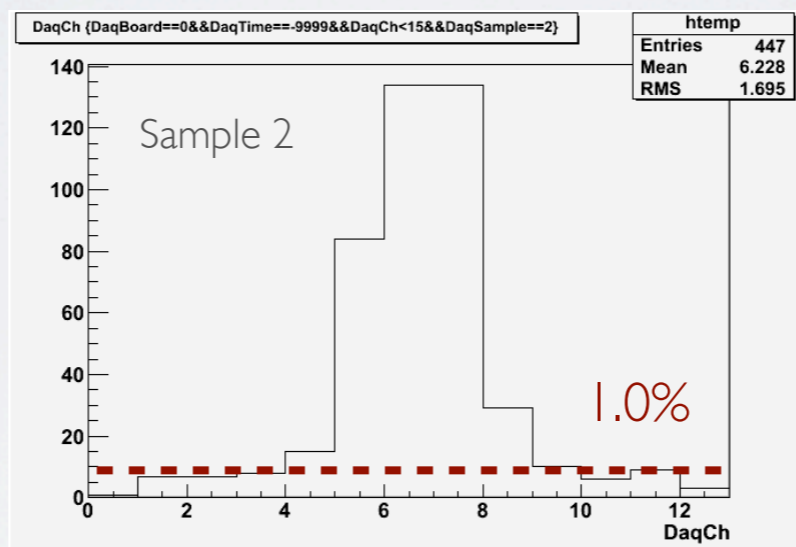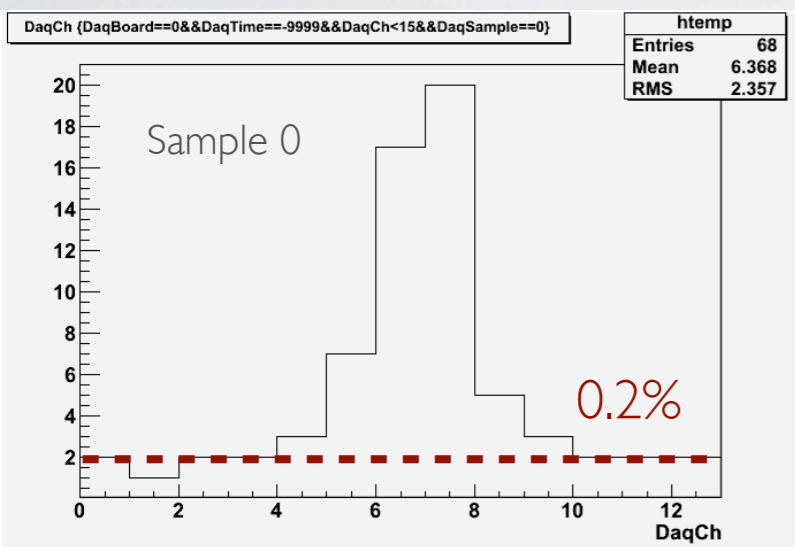8 GeV -> mostly pions
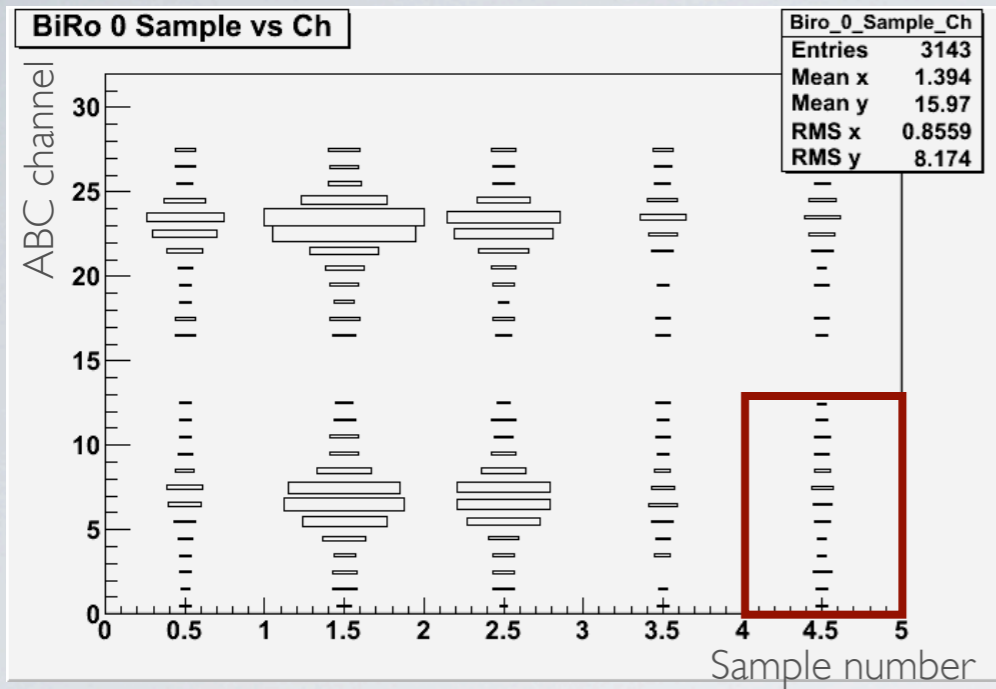
TDC modules read from both side (Left and Right)

- Particles cross the detector in particular the middle region of active layers(lot of counts in middle channels of ABC)

- visible effects of hadronic showers (from top to bottom the size of hit map increases)
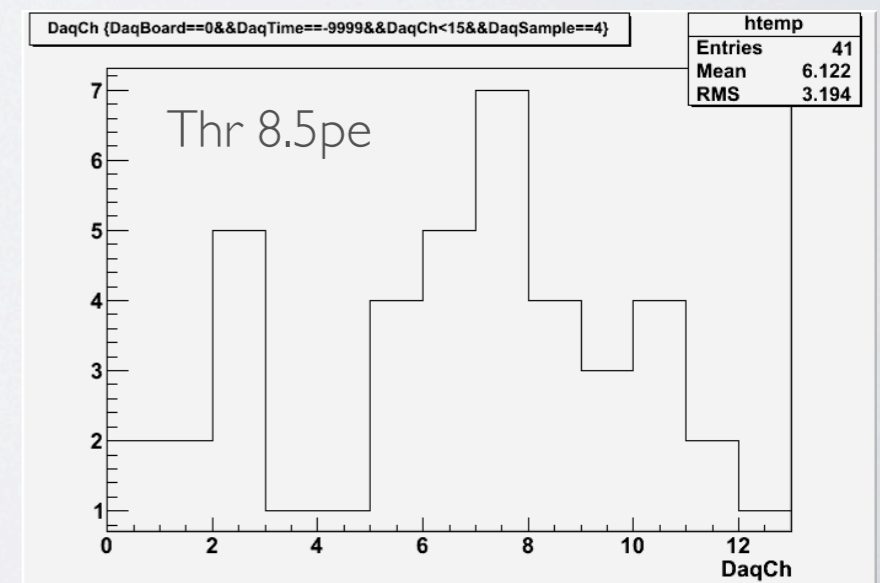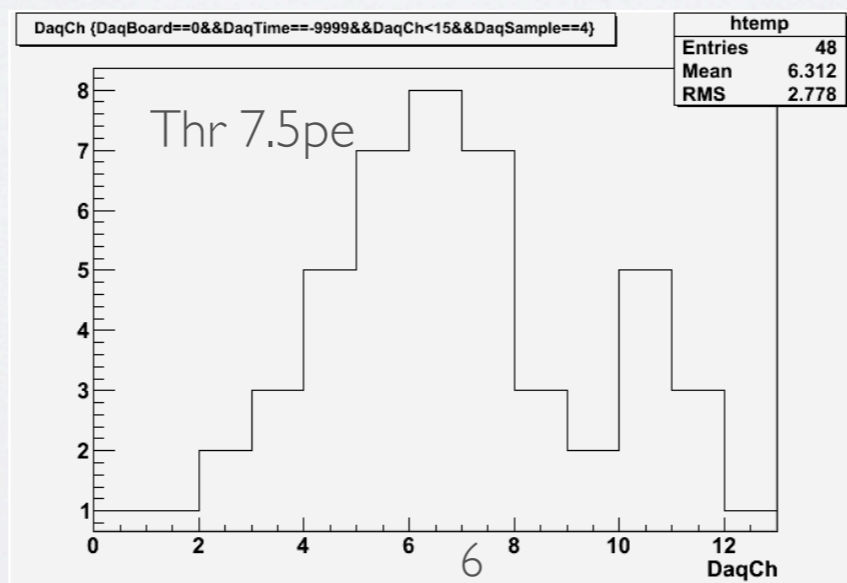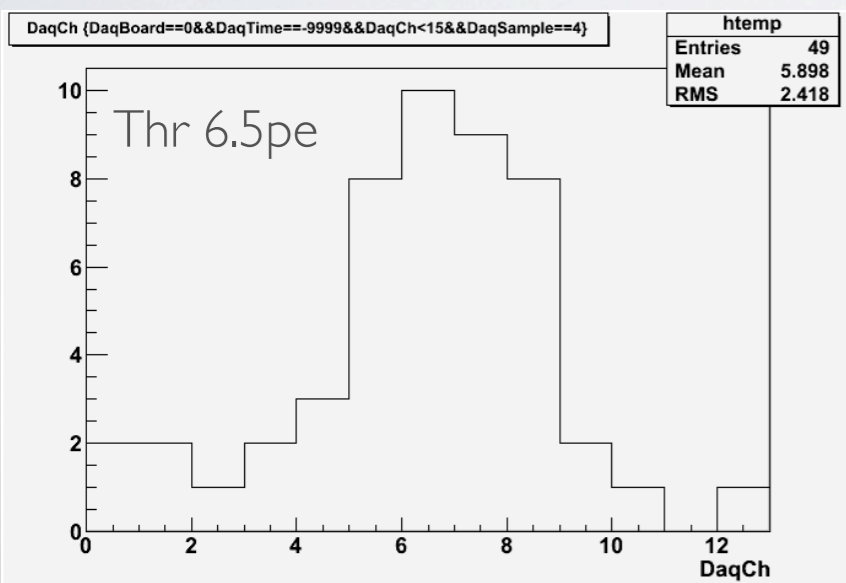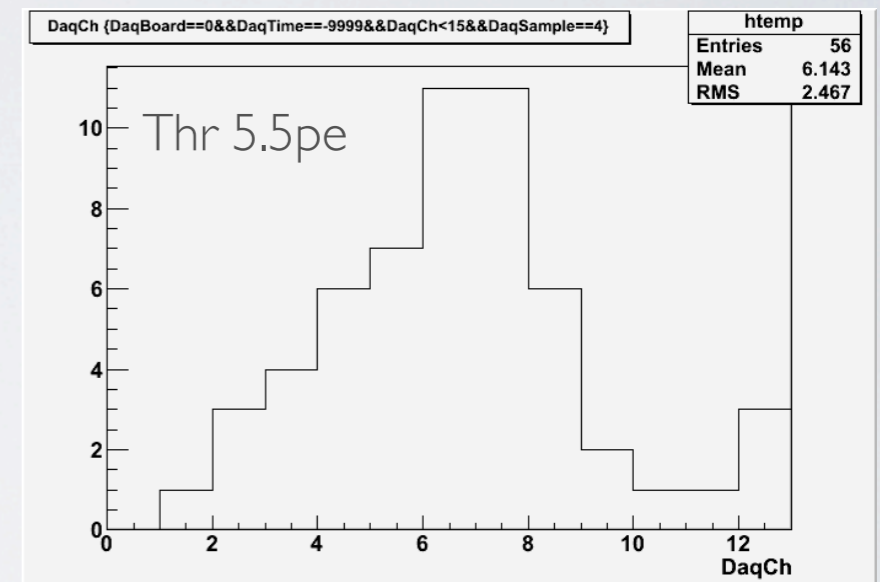
OCCUPANCIES

Thr 8.5pe

Sample 0 — 0.2%

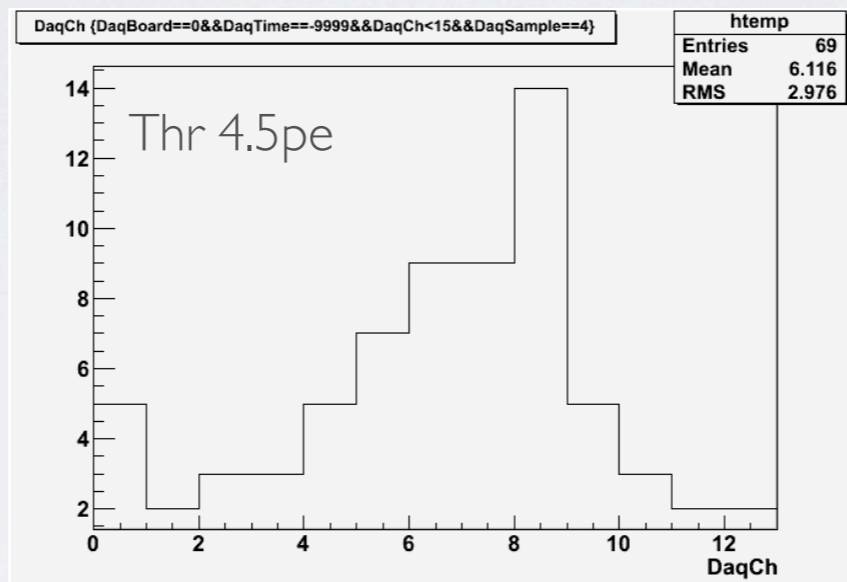Sample 2 — 1.0%

Sample 4 — 0.2%

Sample 1 — 1.5%

Sample 3 — 0.3%

All samples — 3%
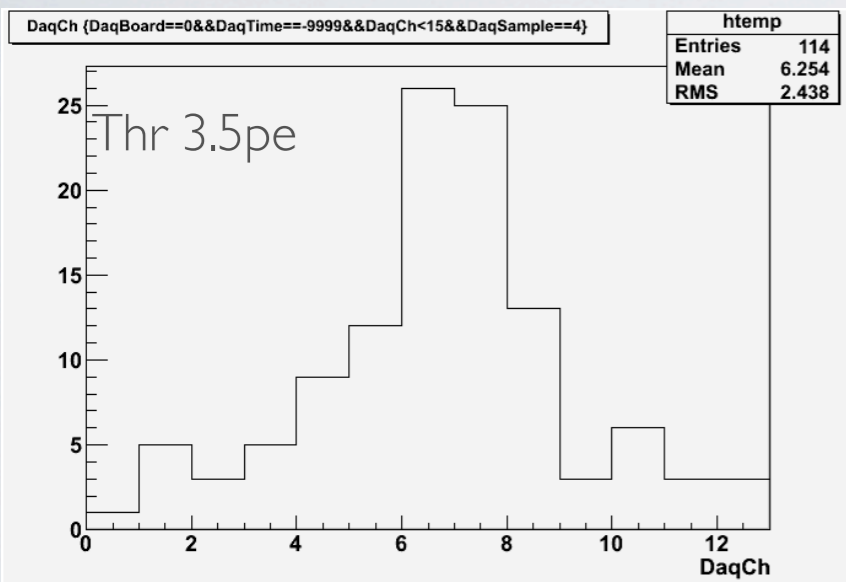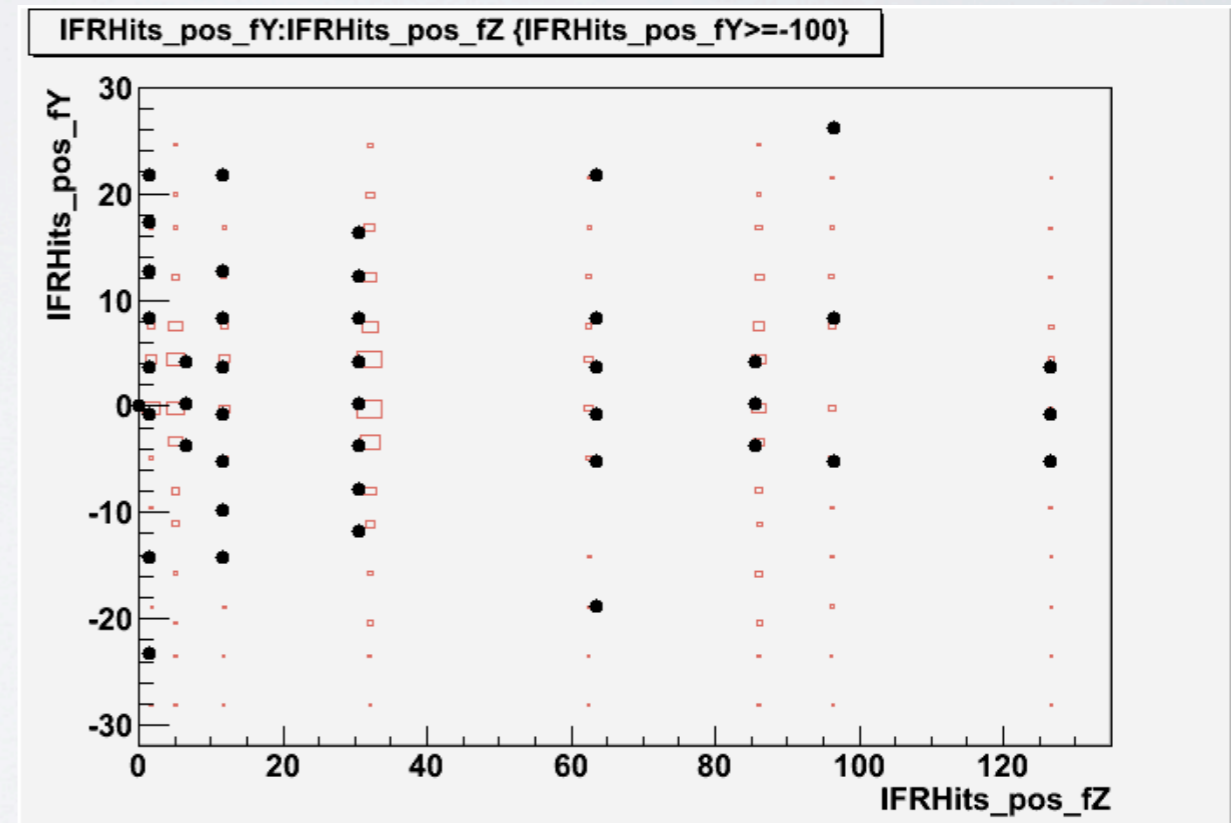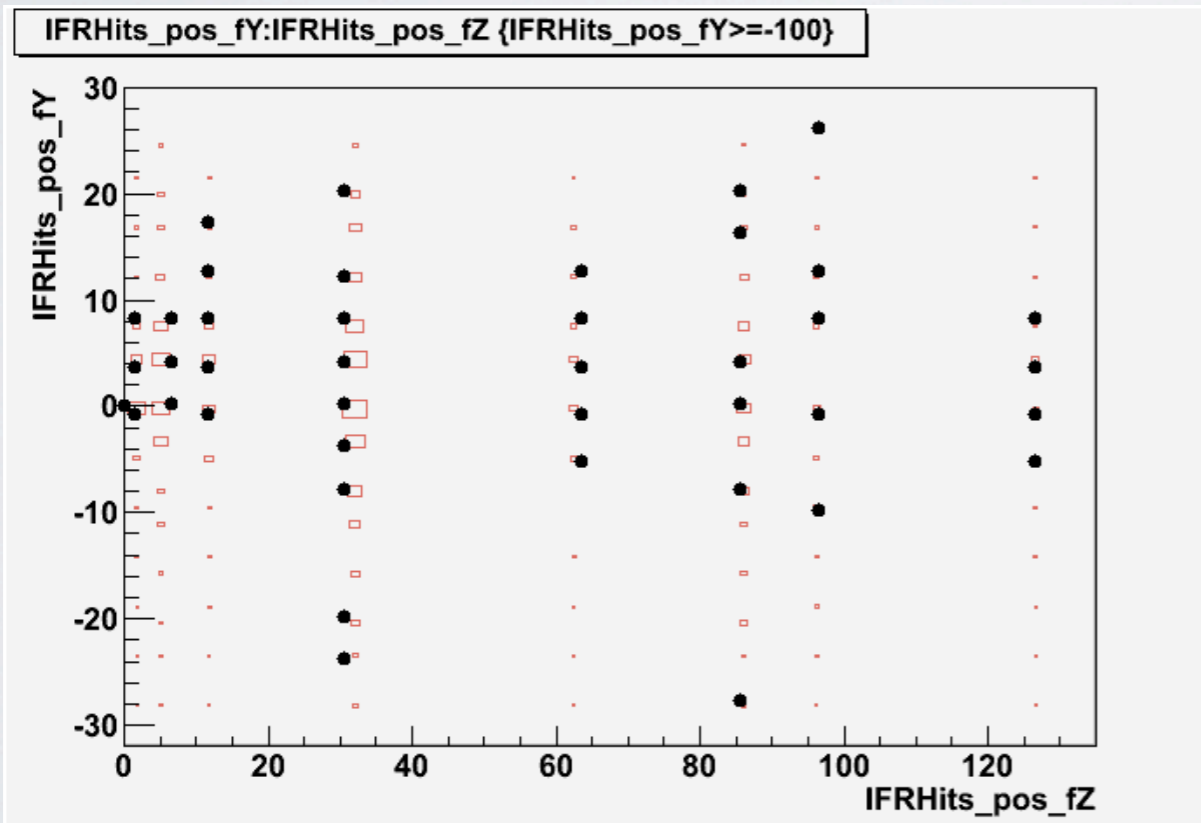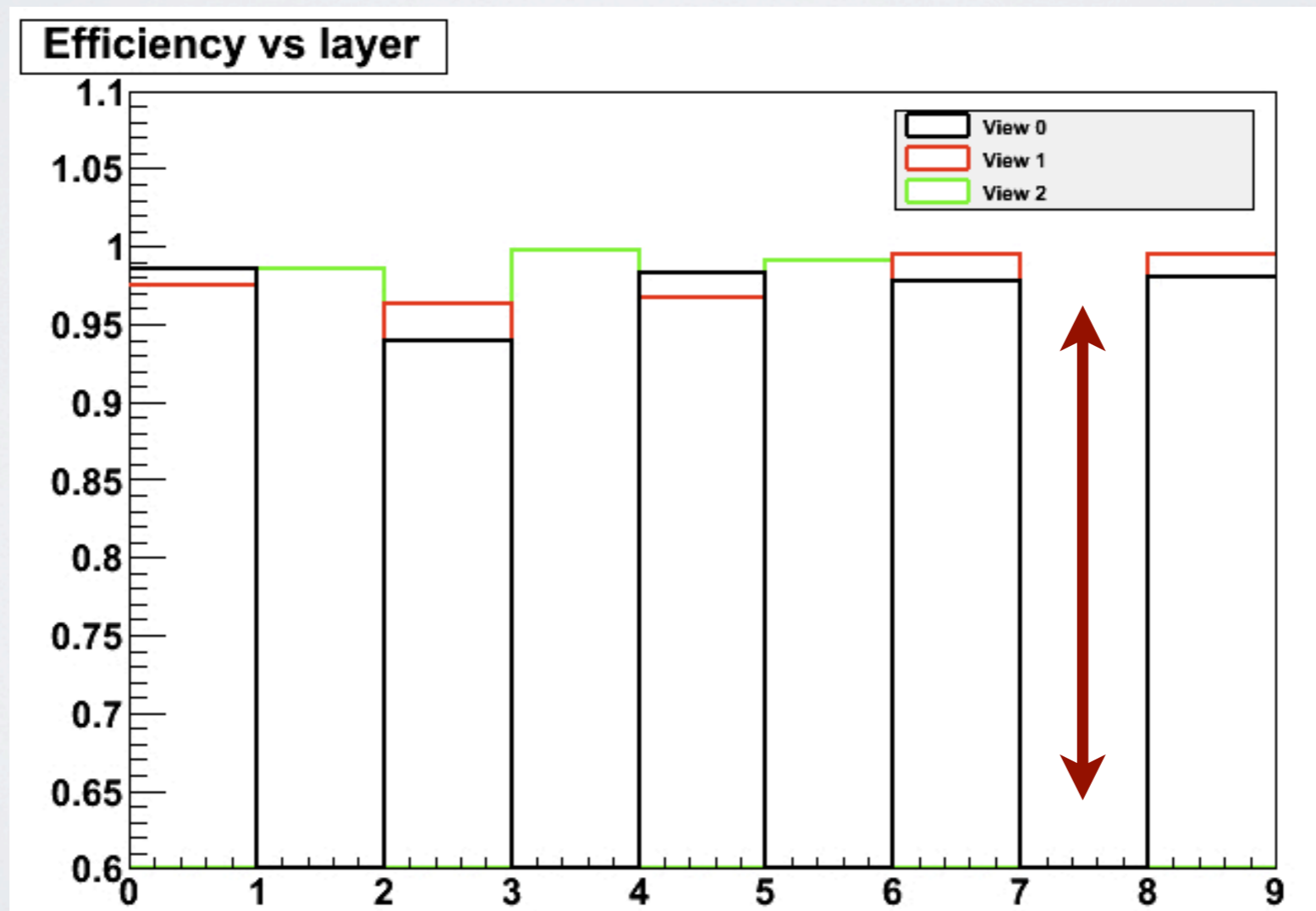
OCCUPANCY FOR SAMPLE 4 VS THRESHOLD

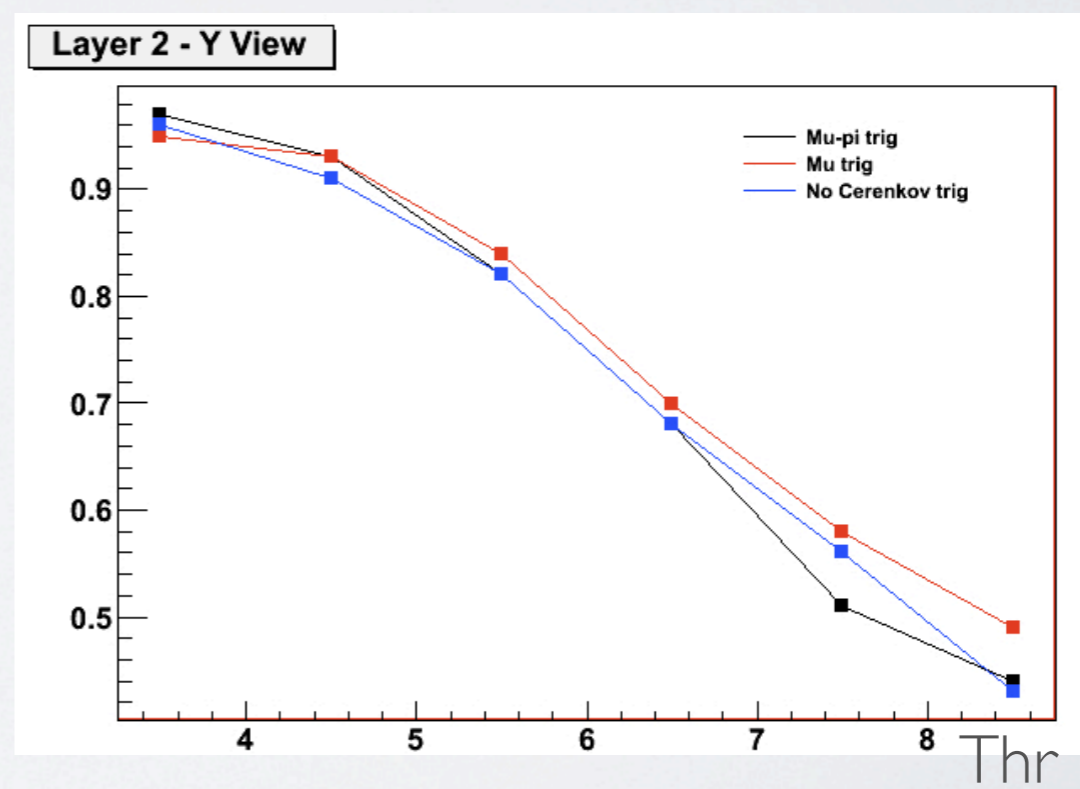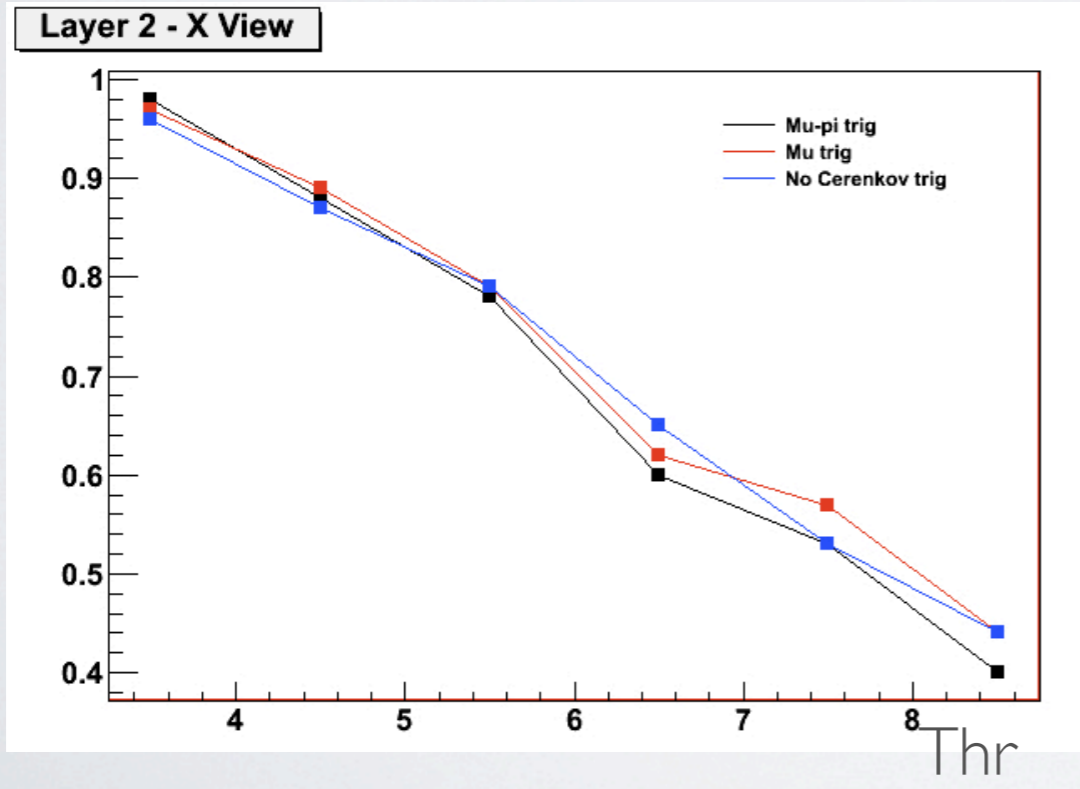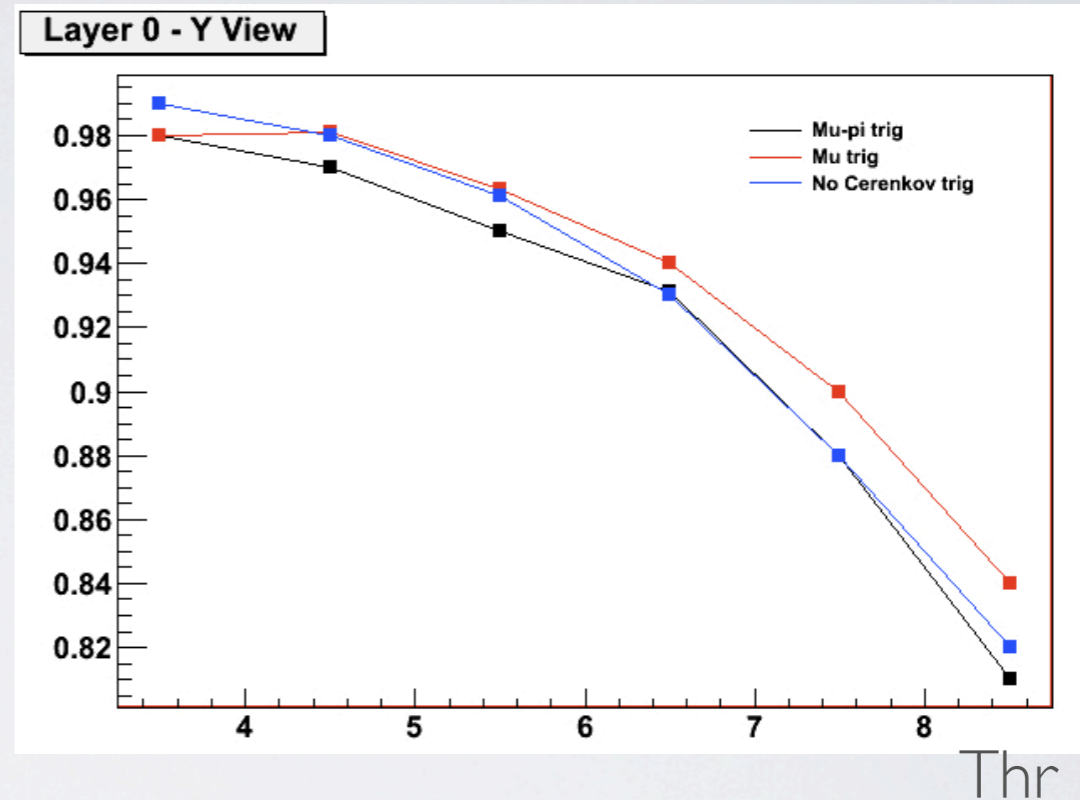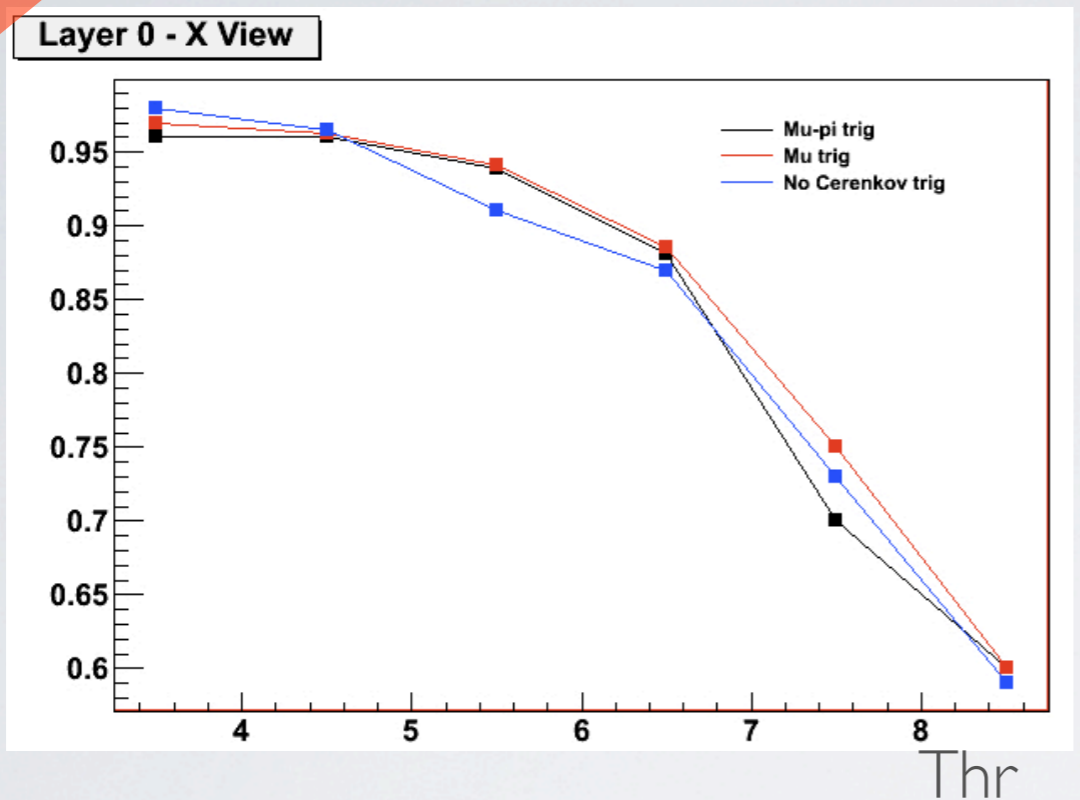# 10 PION EVENTS

Thr 3.5pe

Thr 8.5pe

EFFICIENCY

- Efficiencies can be calculated using muon events, pions events or mixed events, the results shouldn't change much.

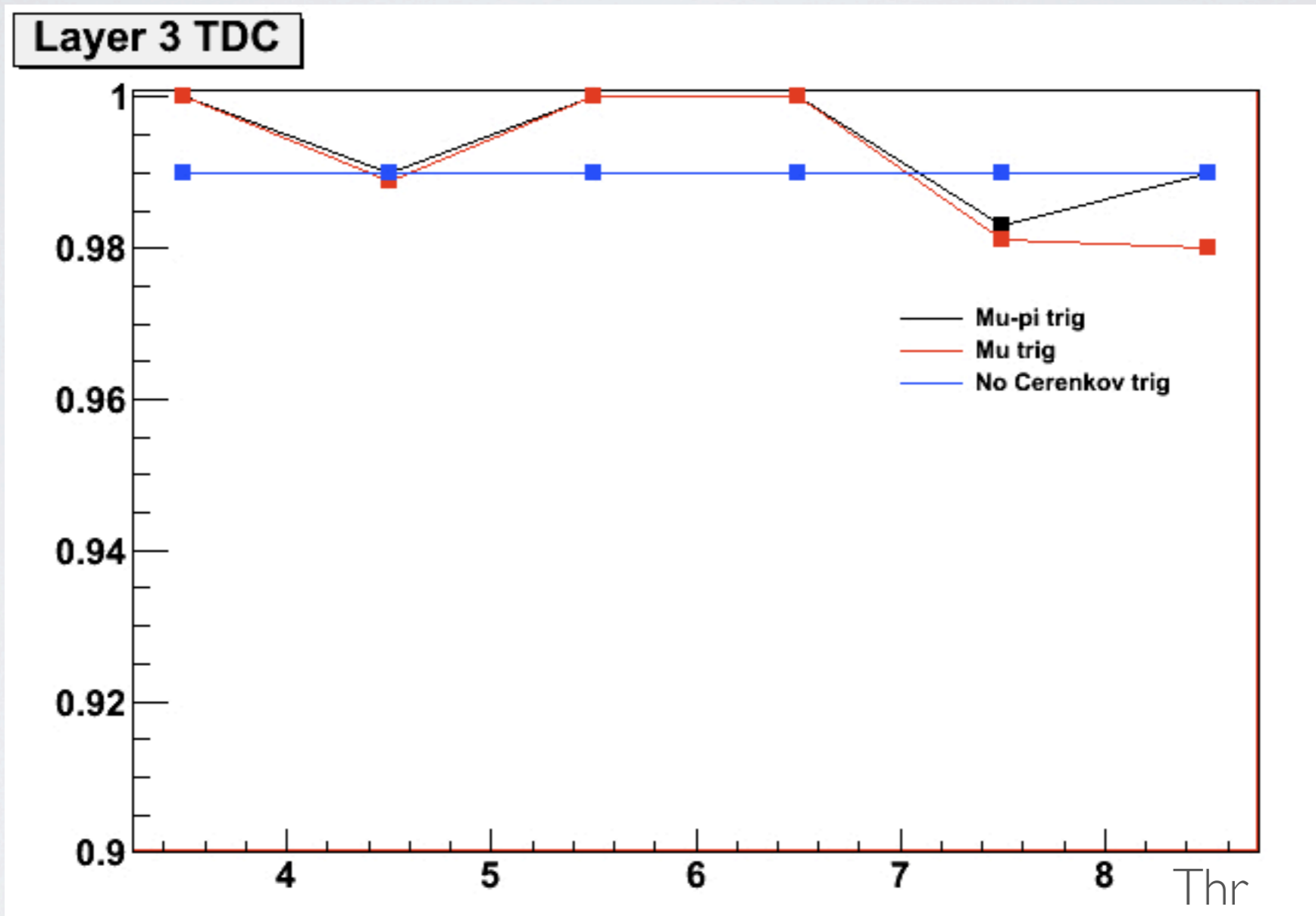- To calculate efficiency we require that the particle hit both the scintillators behind the prototype.

Preliminary

TDC MODULE BIRO EFFICIENCY

TDC HIT MAPS
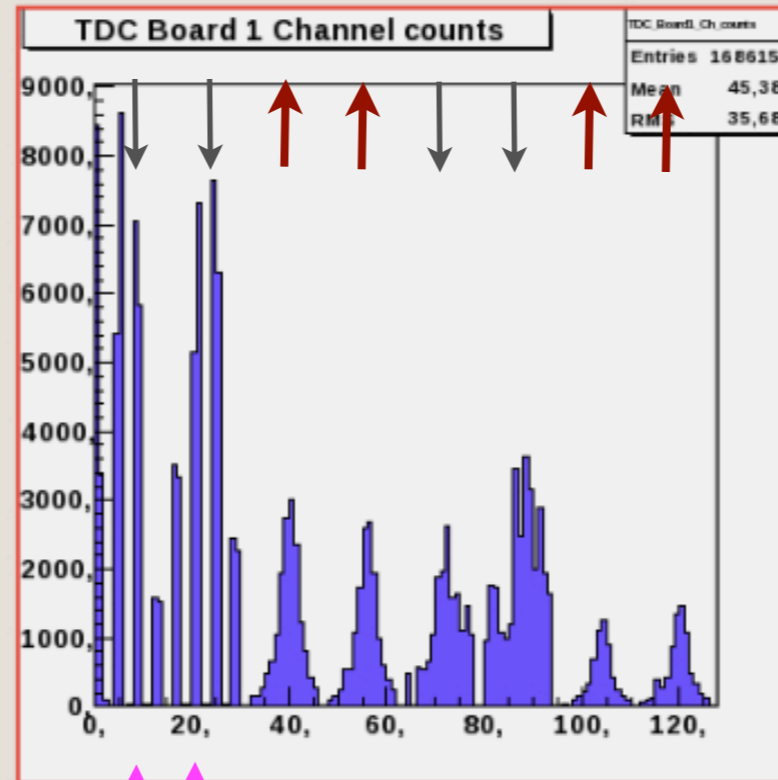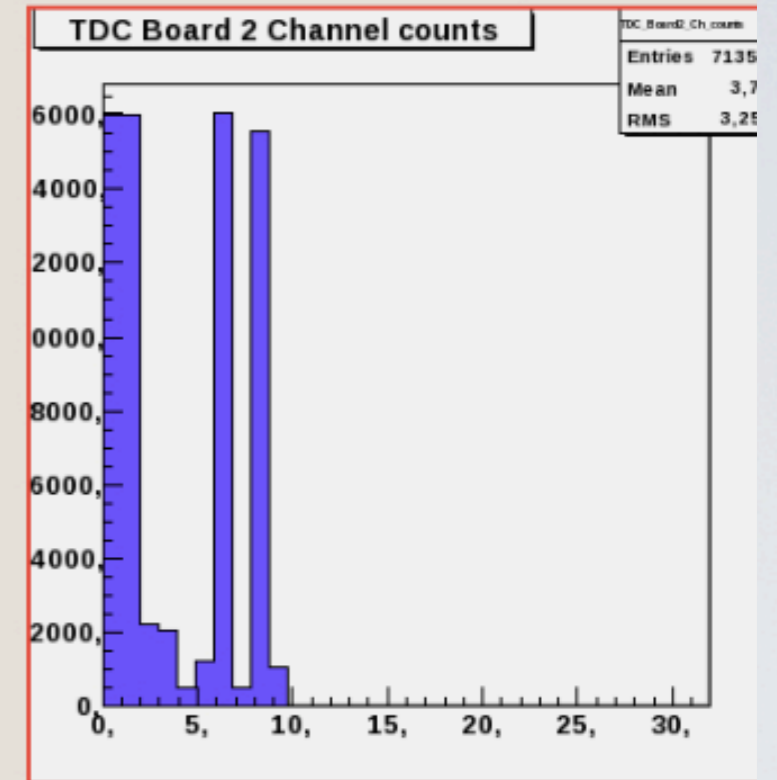
TDC BOARD 0 TIME DIST.
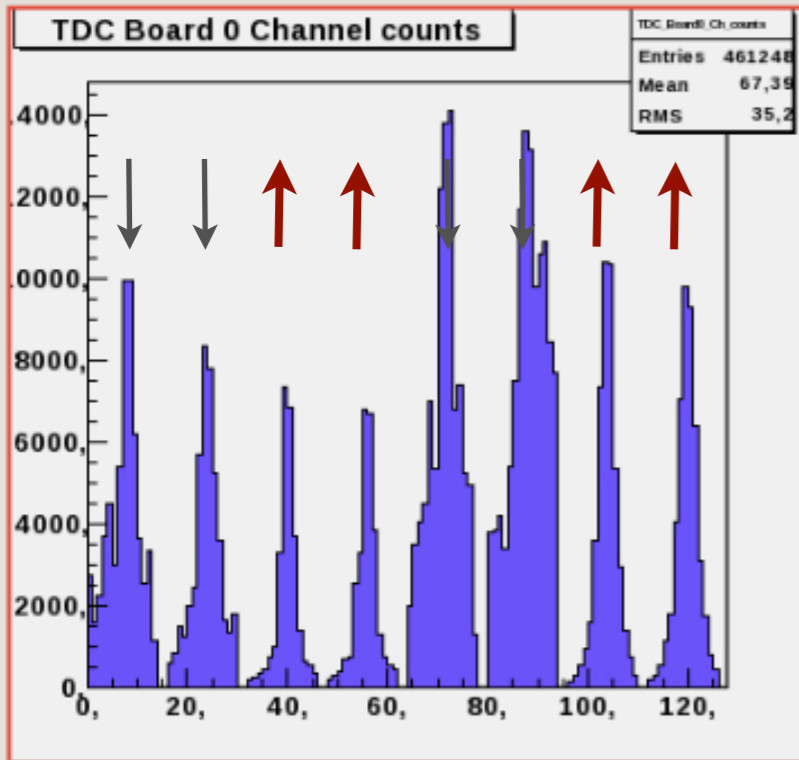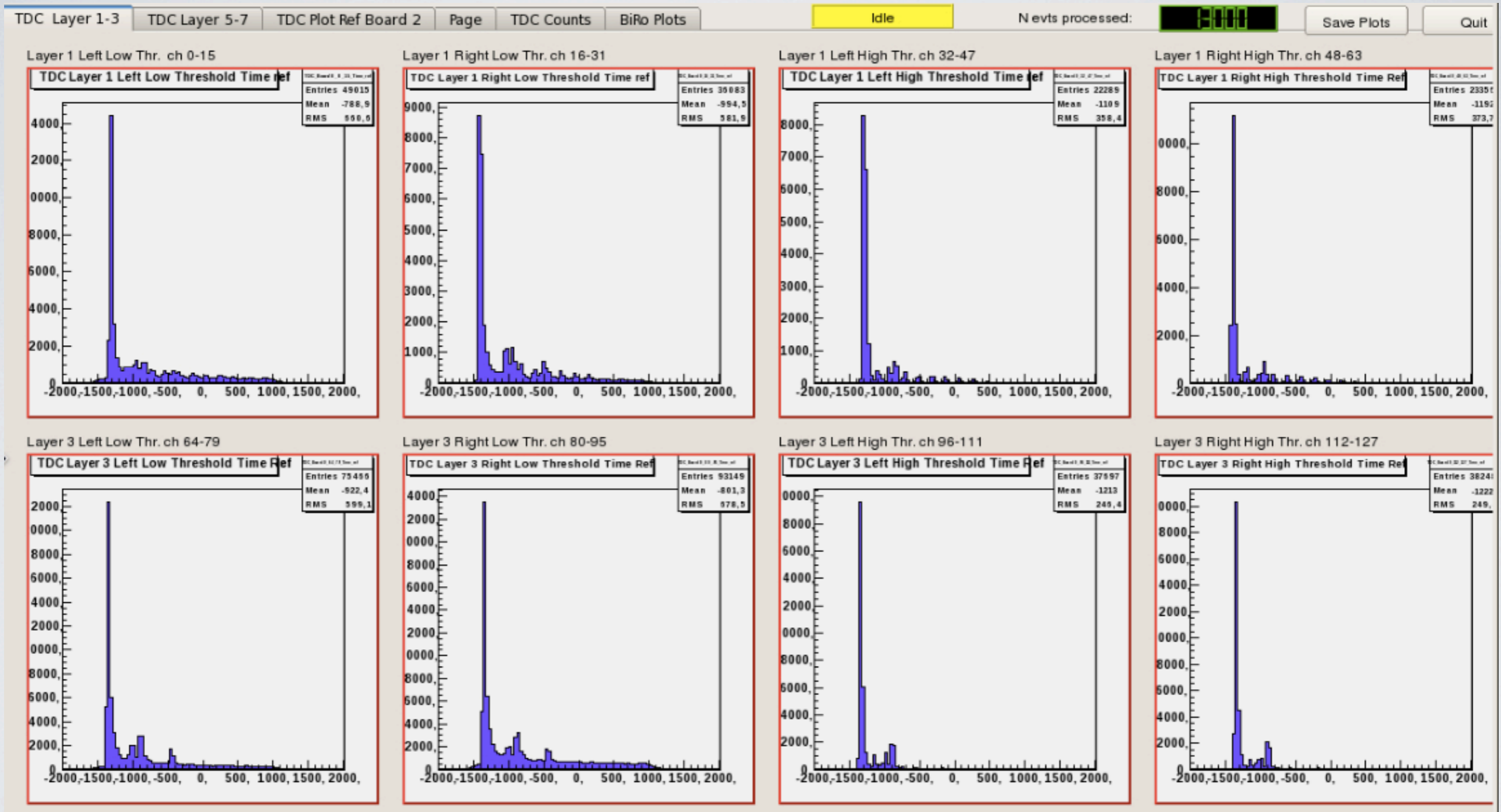
TDC BOARD 1 TIME DIST.

REFERENCE SIGNALS TIME

CONCLUSIONS & FUTURE PLANS

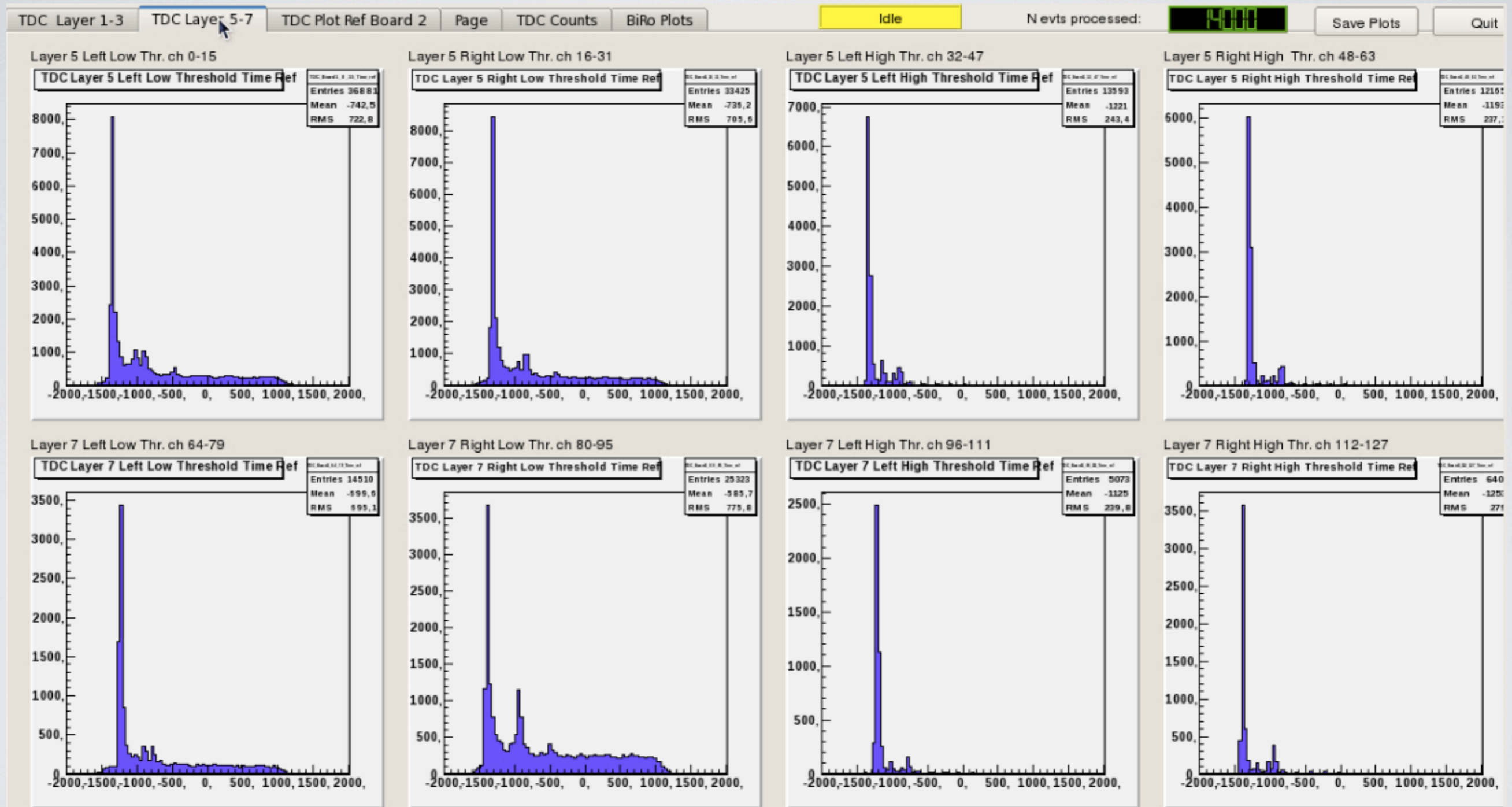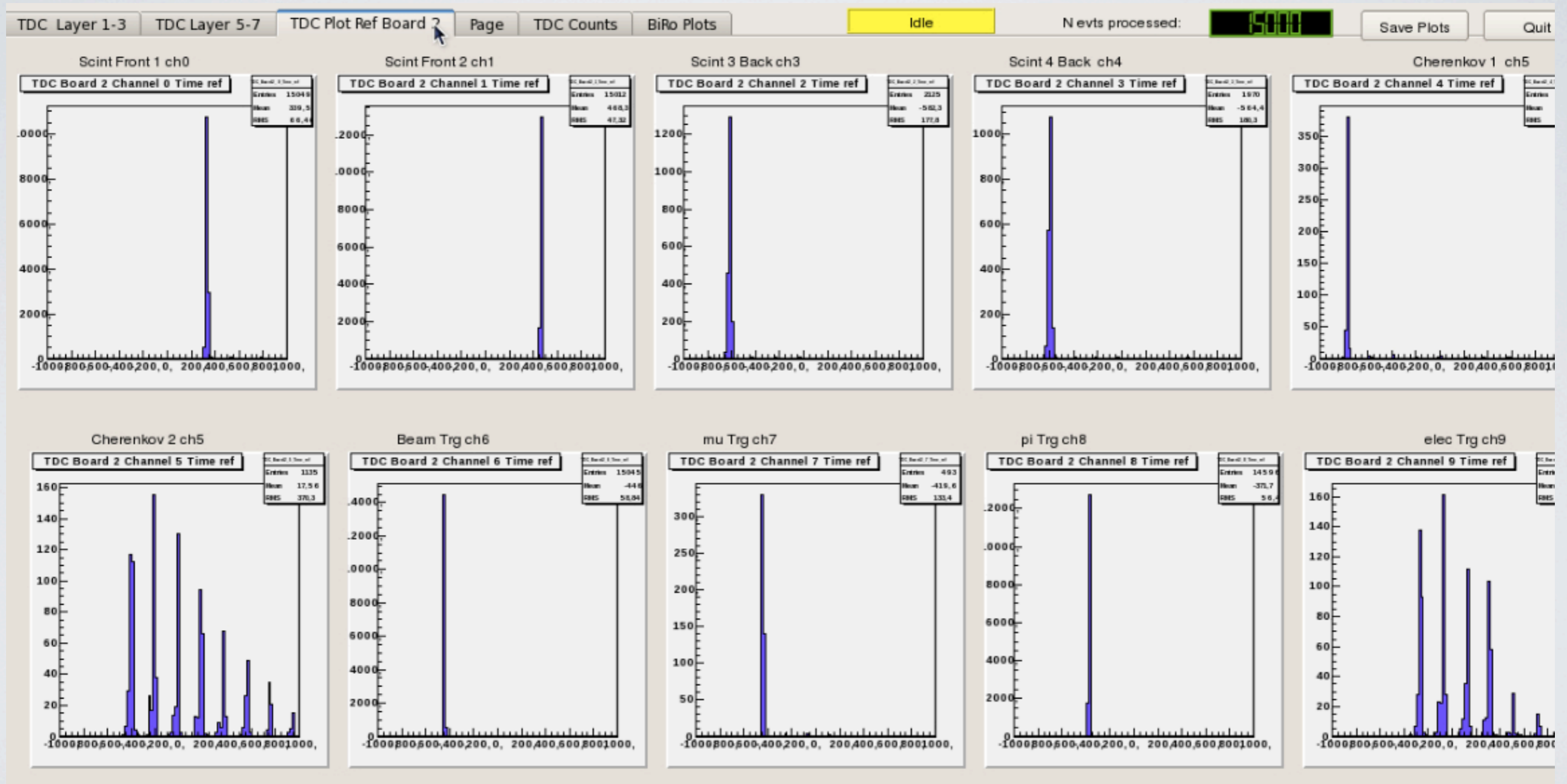- From first look at prototype data seems prototype works correctly

- All prototype data to be analyzed to confirm these preliminary results

- For the next beam test lot of software has been done but to improve